



## Sharing Data

### Overview:

1. Installation and Setup
2. Data Collection and Upload
3. Training
4. Hosting & Maintenance
5. Institutional Aspects & Sustainability

## 1. Installation and Setup

The install and setup of the GeoNode software is usually a simple process. A domain name and web-server must be procured (see hosting and maintenance) and a team-member with basic linux skills will be needed to perform setup tasks.

Other decisions that need to be made with project partners during this step include:

- **Branding and Customization:** The name of the platform, and in some cases a logo, should be decided upon. Some customization of the user interface may also be desired. See (Sri Lanka GeoNode) and Jamaica(?) for examples of this.
- **Language:** GeoNode is already translated into many languages, see <https://www.transifex.com/projects/p/geonode/> but in some cases, further work may be necessary here.<sup>1</sup>

This document presents general guidelines on the steps and requirements to deploy a GeoNode. However the details of the implementation, the exact cost and timelines depend on the goals and the scale of the project and need to be scoped on a project-by-project basis.

- **Home and About Page Text:** Text can be added to the homepage of the GeoNode to give users of the platform information about the data the platform contains and partners involved in the site's management. In some cases, a separate "about" page is created to present more information of this sort than can be easily accommodated on the homepage.

### *Time and Resources Required*

A basic setup of GeoNode can be completed in several hours. Depending on some of the decisions made about branding, language, and user interface customization this can be significantly longer. Simple customization should take a consultant with html, css, and python skills around 5 days. Similar amounts of time should be set aside for most translation tasks.

## 2. Data Collection and Upload

To prepare a GeoNode for launch, an initial collection of data should be uploaded and styled and a suite of maps should be created in order to display this data effectively. Depending on the situation, these tasks can be performed by consultants, as part of an introductory GeoNode training workshop for local partners, or be the responsibility

of a working group created to administer the site.

There are a number of factors that can impact the complexity of this task:

- The amount of data to be uploaded
- The number of providers and how organized the data is
- Does the data need to be cleaned or processed prior to upload?
- What format is the data provided in?
- Does it come with metadata or does this need to be written?

Firm agreement from each of the data providers to release the data as well as the license under which it will be released should be settled on prior to uploading it to the site.

### *Time and Resources Required*

The time required for this step can vary widely depending on the amount of datasets, the number of partners involved, and the data condition. A normal estimate for this phase might be between 10 and 20 days of work for a consultant who should have a basic understanding of GIS and data management issues.

<sup>1</sup>Please contact the GFDRR Innovation Labs team if additional language functionality is required.



### 3. Training

As part of the lead-up to the launch of the platform, all project partners should receive the necessary training for their role in the project. Depending on the participant this could take several forms and in many GeoNode deployments, multiple trainings are organized to accommodate the variety of needs.

#### **Basic GeoNode Training**

*Time Required:* 1/2 day - 1 day

*Ratio of Trainers to Participants:* Max 1:15

*Topics Covered:* Basic usage of the GeoNode; downloading, uploading and sharing data; setting permissions on data; adding metadata; and creating simple maps. Often, this training is combined with actual upload and styling of the participants' data to the GeoNode. In this case, the training could last 2-3 days in order to ensure proper time for these tasks to be completed.

*Required Background of Participants:* Basic knowledge of GIS is useful but this training should be accessible to anyone with basic computer skills.

*Link to Example Curriculum:* <http://docs.geonode.org/en/latest/tutorials/users/index.html#users>

#### **GeoNode Administrator Training**

*Time Required:* 1-2 days

*Ratio of Trainers to Participants:* Max 1:5

*Topics Covered:* This training is intended for users with backgrounds in software development or systems administration who will be responsible for maintenance and upkeep of the site, if a consultant or firm is not hired to perform these tasks. The training should cover the basics of site administration and user management through the GeoNode interface, as well as management of the server, basic troubleshooting and maintenance

*Required Background of Participants:* Linux administration

*Link to Example Curriculum:* <http://docs.geonode.org/en/latest/tutorials/admin/index.html#admin>

#### **GeoNode Developer Training**

*Time Required:* 1-2 days

*Ratio of Trainers to Participants:* Max 1:5

*Topics Covered:* This training should give participants the skills necessary to customize a GeoNode installation, adding new functionality, visualization, or analysis features. Depending on the complexity of features desired, the training period may

need to be extended. Having these features implemented as part of training with local developers may be preferable to hiring external consultants as it will build local capacity to maintain and further update the site in the future.

*Required Background of Participants:* Programming skills including Python/ Django, HTML, CSS, and Javascript

*Link to Example Curriculum:* <http://docs.geonode.org/en/latest/tutorials/develop/index.html#develop>

#### *Time and Resources Required*

There are many GeoNode training materials available for free online but consultants or firms hired to conduct the training should preferably have some background with the software and conducted technical trainings or workshops in the past. The OpenDRI team has had some success conducting remote workshops but supporting the travel of the trainer(s) to the physical location of the participants is in most cases desirable. The trainings themselves require computers for all participants if they cannot bring their own, comfortable workspaces, reliable power and internet, and projector. In many cases lunch or refreshments and per diem and travel costs for participants will also be expected.

## 4. Hosting and Maintenance

GeoNode is an open-source software so there are no licensing costs associated with the platform. However, hosting and maintenance will be required. Server requirements can be found here: <http://docs.geonode.org/en/latest/intro/install.html>

In some cases, local project partners will have access to servers. In other cases, physical servers will need to be procured for the host organization. If project partners are amenable, cloud hosting through Amazon or another provider can be obtained cheaply. Simple cloud setups cost as low as \$250/month and remove the need for hardware purchase and maintenance.

A domain name (e.g. [www.haitidata.org](http://www.haitidata.org)) will need to be assigned to the site. This name should be agreed upon by local partners and reflect the nature and ownership of the site. In some cases, this will just be an extension of a domain already owned by government partners (e.g. [www.masdap.org](http://www.masdap.org)), other times a new domain will need to be purchased. Domain names can be purchased from a number of online resellers and generally cost between \$10 and \$50/year. Regular backups of the website should be performed and stored on a different server than the host location. There are a number of different approaches

for this that should be discussed with the technical team in charge of the project.

Site statistics that track number of page visits, which datasets and pages are being viewed, and how visitors are finding the site should be captured to help the project team better understand the interests and needs of their platform's users. Google Analytics is a simple and effective way to accomplish this and the OpenDRI team is currently working on tools that will improve this.

GeoNode software is periodically updated by the community in order to improve the platform and add new functionality. To take advantage of these improvements, the software running your platform will need to be updated as well. Barring significant customization, this is usually a simple process.

### *Time and Resources Required*

Although it depends on how the GeoNode is hosted and the extent to which it has been customized, period maintenance and basic upkeep is usually not a very time-consuming task. A number of firm contracts for GeoNode setup have included small budgets for the firm to perform software upgrades, troubleshoot any issues with the platform, and provide remote technical assistance to the local project team.



Sri Lanka GeoNode RiskInfo.lk

## 5. Institutional Arrangements & Sustainability

While the technical aspects of GeoNode installation and setup can feel daunting, it is the institutional arrangements created with local partners and data providers that will in the long term, lead to the success or failure of these projects. The arrangements need to address several questions:

- Who are the main partners involved with the management of the site and what are their responsibilities? Who will have accounts on the platform?
- If there are multiple institutions managing the site jointly, how often will they meet and how will decisions be made?

- How will the site be branded and marketed?
- What data will be on the site and under what license? How frequently will the data be updated or added to?
- What is the time period for which the project is intended to last? The recovery period for a particular disaster? The length of a risk assessment? Indefinitely?

Beyond the initial launch, significant work is required to maintain institutional support for GeoNode platforms as well as to create a community of users around the data sharing platform. There are a number of strategies that can be used to help grow this community and ensure the newly opened data is put to good use:

- Communicating about and promoting the platform in the government agencies for operational use
- Promoting the use of the platform for research purpose at universities and other relevant organizations
- Further trainings and workshops beyond the initial capacity building program
- Host Code for Resilience events or similar programs
- Developing trainings or other activities that clearly show the value of the data hosted on the GeoNode

## Further Resources

- OpenDRI Field Guide
- GeoNode Website: <http://geonode.org>
- GeoNode Training Materials
- GeoNode User Mailing List
- CASE STUDY X
- Sample ToR for Open Data Working Group
- Data Licensing Writeup
- OpenDRI Serious Game Info
- Code for Resilience Website